

Title (en)  
HANDLING DEVICE FOR SHELVES

Publication  
**EP 0329642 B1 19910424 (DE)**

Application  
**EP 89890038 A 19890215**

Priority  
AT 36088 A 19880216

Abstract (en)  
[origin: EP0329642A1] Device for feeding and removing containers from shelves, in which a drivable, horizontally displaceable chassis (1) carries a vertical lifting mast (5) on which a drivable lifting slide (4) is held in such a way as to be displaceable in the vertical direction, and in which a control system (32) is provided for the corresponding drives. In order to permit high acceleration of the chassis (1) at relatively low drive power, provision is made for the drives (21, 24) and their control system (32) to be arranged in a fixed position and for the transmission of force to the chassis (1) and lifting slide (4) to be effected via separate, flexible tension means (22, 25), e.g. ropes, chains or toothed belts, which are run over deflection pulleys (23, 26, 27, 29, 30) and the two ends of which are fastened to the chassis (1) or to the lifting slide (4), deflection pulleys (26) for the tension means (25) being arranged in the bottom and top area of the vertical lifting mast (5) for the lifting slide (4). <IMAGE>

IPC 1-7  
**B65G 1/04; B66F 9/07**

IPC 8 full level  
**B66F 9/07** (2006.01); **B66F 9/075** (2006.01)

CPC (source: EP)  
**B66F 9/07** (2013.01); **B66F 9/0755** (2013.01)

Cited by  
CN106743017A; US5361481A; US5397211A; EP1110904A1; US5838572A; DE4202668A1; US5156514A; CN108974957A; US5385243A; US5405232A; US5460475A; DE4131481A1; DE19722108B4; CN110775501A

Designated contracting state (EPC)  
BE CH DE IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0329642 A1 19890823; EP 0329642 B1 19910424**; AT 391845 B 19901210; AT A36088 A 19900615; DE 58900089 D1 19910529; DK 166873 B1 19930726; DK 72489 A 19890817; DK 72489 D0 19890216; NO 172112 B 19930301; NO 172112 C 19930609; NO 890634 D0 19890215; NO 890634 L 19890817

DOCDB simple family (application)  
**EP 89890038 A 19890215**; AT 36088 A 19880216; DE 58900089 T 19890215; DK 72489 A 19890216; NO 890634 A 19890215